

FIG. 1

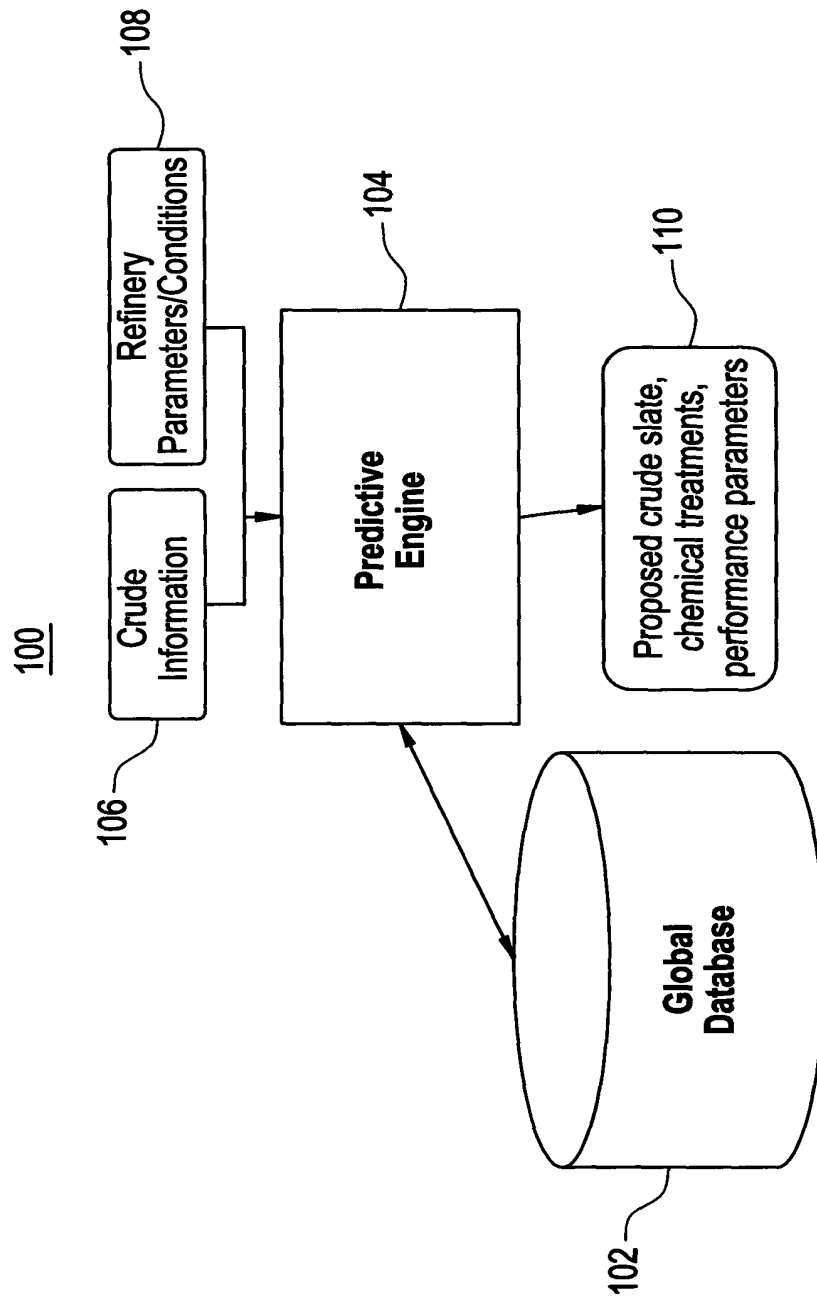


FIG. 2

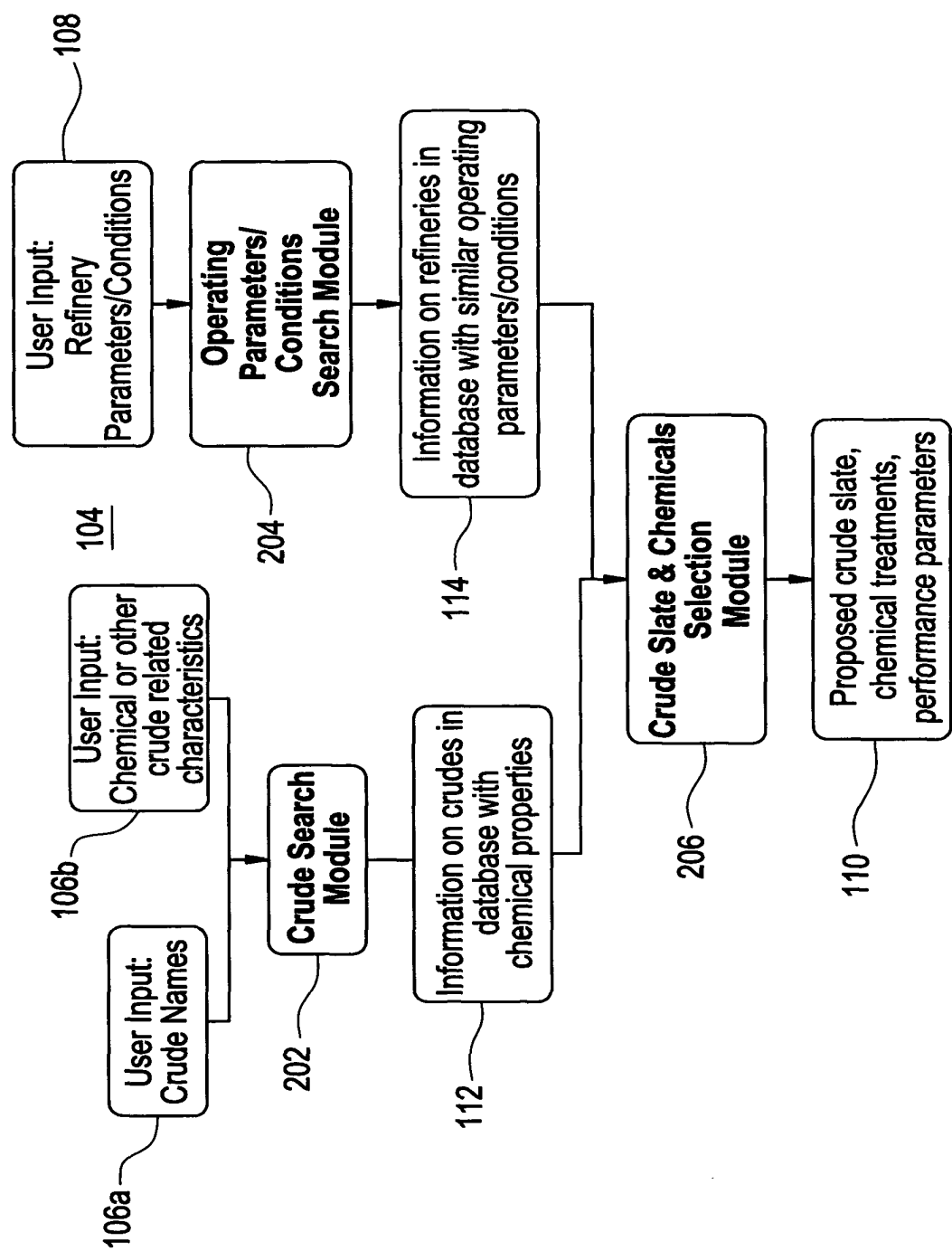


FIG. 3

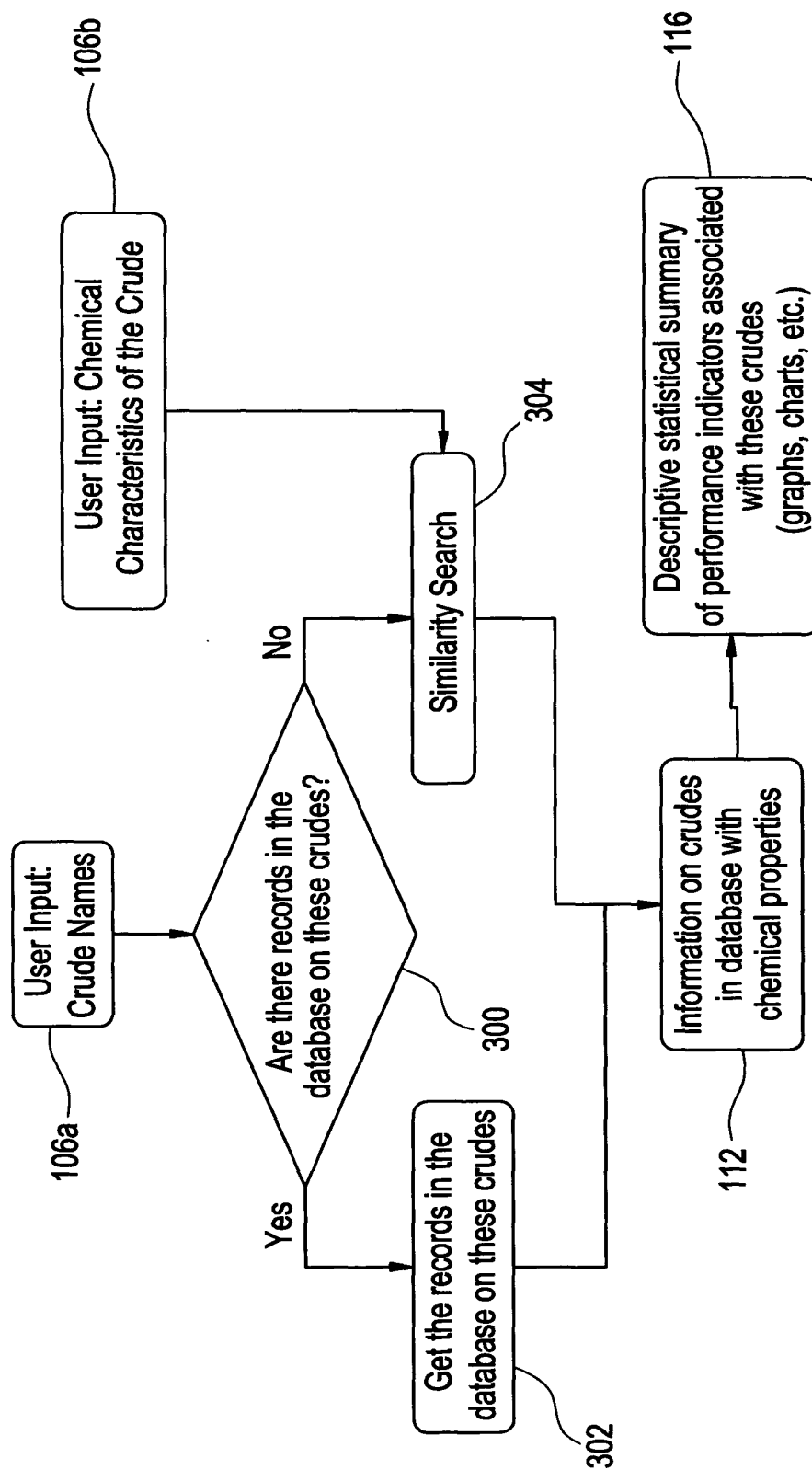
202

FIG. 4

204

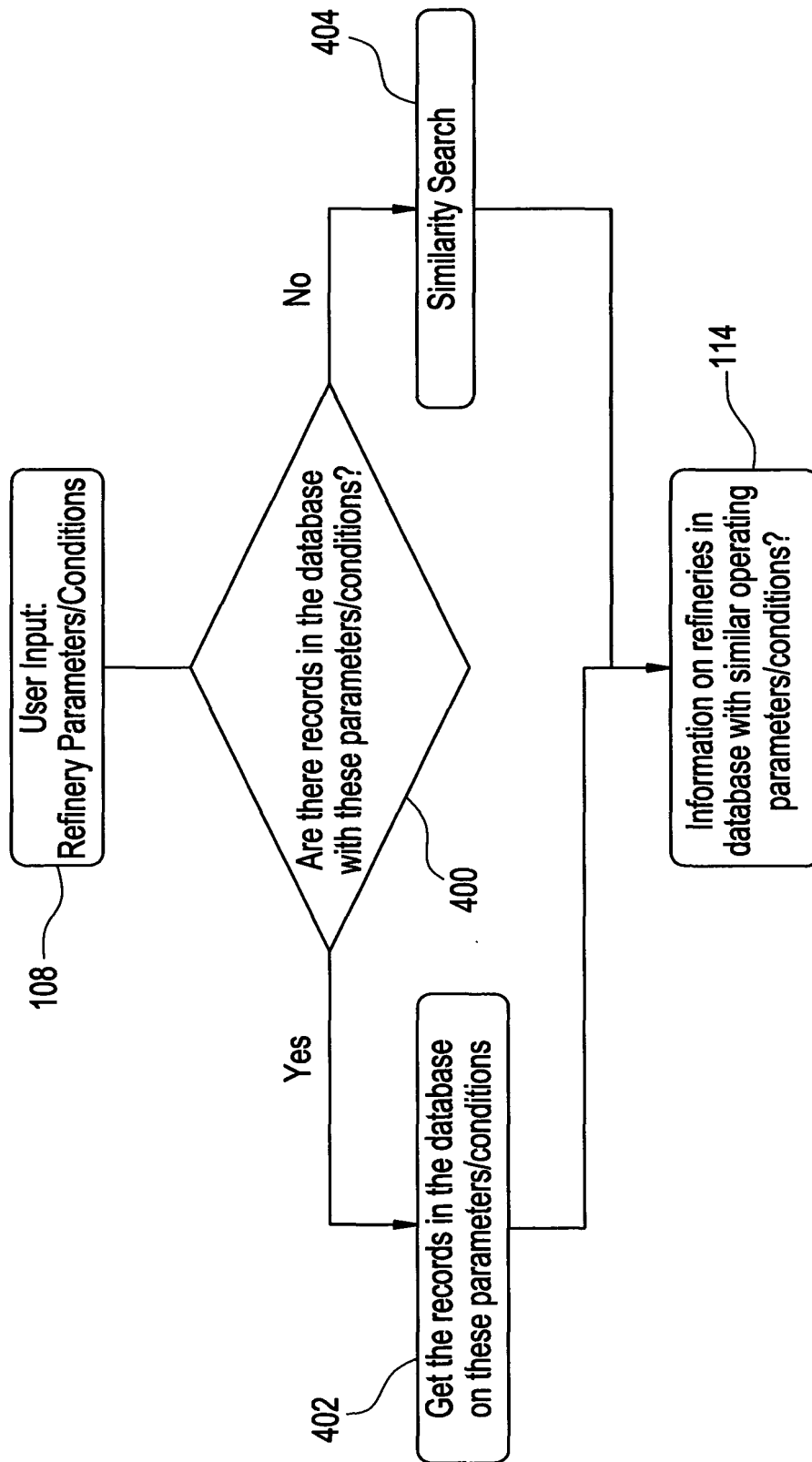


FIG. 5

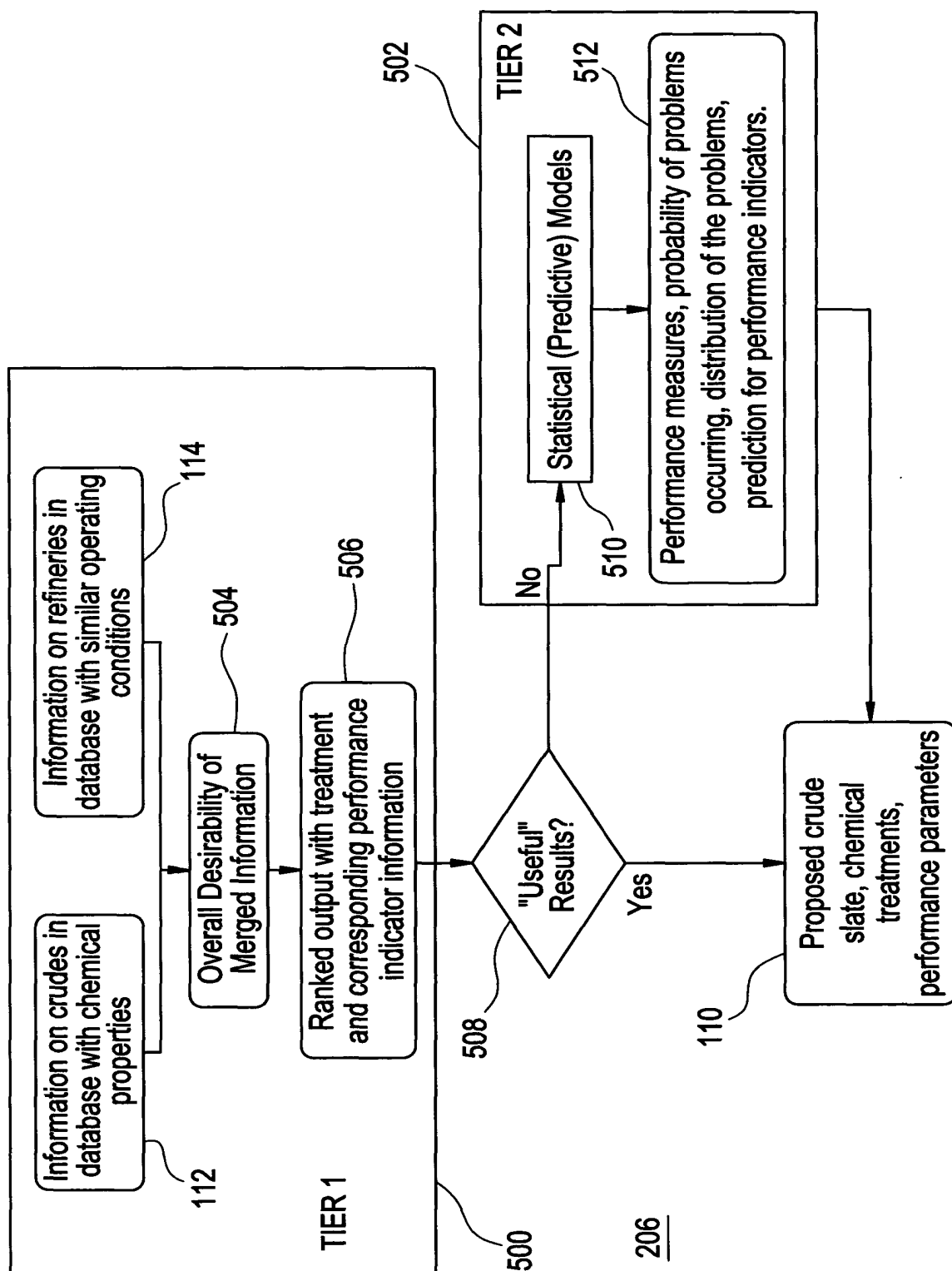


FIG. 6

Select crudes of interest within slate:

Crude Name	Percent of Slate?	Goal	Target	Imp.
ARAB EXTRA LIGHT	0 % - 100 %	Target value	9.50	5
ARAB MEDIUM	0 % - 50 %	Maximize	0.50	5
ARAB HEAVY	0 % - 100 %	Minimize	75.0	5
ARAB LIGHT	0 % - 100 %	Stay within Range	15.0	5
		Target value	15.0	
		Target value	15.0	
		Target value		

600 602a 602b 604 604a 605 606

FIG. 7

Select a Refinery/Unit

R00001 Refinery Not in List

Select Refinery Operating Parameters of Interest

Include in Search	Operating Parameter	Imp.	Current	Units	Historical Range	Goal
<input checked="" type="checkbox"/>	Wash Water	<input type="text" value="5"/>	<input type="text" value="1.0"/>	<input type="text" value="1=Yes 0=No"/>	<input type="text" value="0.0"/> - <input type="text" value="1.0"/>	<input type="text" value="Target value"/>
<input checked="" type="checkbox"/>	Raw BSW	<input type="text" value="5"/>	<input type="text" value="0.025"/>	<input type="text"/>	<input type="text" value="0.0"/> - <input type="text" value="1.45"/>	<input type="text" value="Target value"/>
<input checked="" type="checkbox"/>	Raw Crude Salt Content	<input type="text" value="5"/>	<input type="text" value="2.0"/>	<input type="text" value="lbs/1000BBL"/>	<input type="text" value="0.0"/> - <input type="text" value="150.0"/>	<input type="text" value="Target value"/>
<input checked="" type="checkbox"/>	Overhead Temp	<input type="text" value="5"/>	<input type="text" value="249.5"/>	<input type="text" value="degrees C"/>	<input type="text" value="0.0"/> - <input type="text" value="300.0"/>	<input type="text" value="Target value"/>
<input checked="" type="checkbox"/>	Overhead Pressure	<input type="text" value="5"/>	<input type="text" value="23.95"/>	<input type="text" value="psi"/>	<input type="text" value="0.0"/> - <input type="text" value="35.0"/>	<input type="text" value="Target value"/>
<input checked="" type="checkbox"/>	Overhead pH	<input type="text" value="5"/>	<input type="text" value="5.7"/>	<input type="text" value="pH"/>	<input type="text" value="0.0"/> - <input type="text" value="7.0"/>	<input type="text" value="Target value"/>

700
702
711
704
706
708a
708b
708
710

FIG. 8

Score Results of Selected Crude Slates							
Select	Match	Slate Crudes	Overhead Exchanger Corrosion	Desalter Efficiency	Matching Score for Crude Slate	Matching Score for Operating Condition	Overall Score
⊙	<u>exact</u>	ARAB EXTRA LIGHT (0.0%) ARAB HEAVY (77.0%) ARAB LIGHT (14.0%) ARAB MEDIUM (0.0%)	14.5	0.875	.99	1.00	.99
○	<u>subset</u>	ARAB EXTRA LIGHT (0.0%) ARAB HEAVY (77.0%) ARAB LIGHT (14.0%) ARAB MEDIUM (0.0%) EDCENE (26.0%)	14.5	.0875	.99	1.00	.99
Score using Model		800	802	804	806	808	810
Modify Criteria		812	814	816			

FIG. 9A

Predictive Modeling User Input

Confirm Crude Slate:

Crude Name	Current %	Target %
ARAB EXTRA LIGHT	9.0	<input type="text" value="9.50"/>
ARAB HEAVY	77.0	<input type="text" value="75.0"/>
ARAB LIGHT	14.0	<input type="text" value="15.0"/>
ARAB MEDIUM	0.0	<input type="text" value="0.50"/>

TAN: *

Responses

Response	Goal	LSV	USV	Target
Corrosion	<input type="text" value="Minimize"/>	<input type="text" value="0"/> mpy	<input type="text" value="14.5"/> mpy	<input type="text"/>
SRE	<input type="text" value="Maximize"/>	<input type="text" value="0.875"/> %	<input type="text" value="0.99"/> %	<input type="text"/>

904

904a

904b

904c

904d

900

902

FIG. 9B

Treatment Information

Desalter Treatments

Name	Value	Rate	
		Oil	Water
Primary Breaker	2w157	4.949599809	0.0
Reverse Breaker	n	0.0	
Wetting Agent	2w801	0.949339988	

Corrosion Treatments

Name	Value	Rate
Neutralizing Amine *	dm5503	5.0
Overhead Filmer	5kb	3.5
Tower Filmer	null	0.0

Ammonia Rate: * 0.0

* - denotes required fields to run example model

Get Predictions Reset Back to Slates

914 916 918

908 910 912

FIG. 10

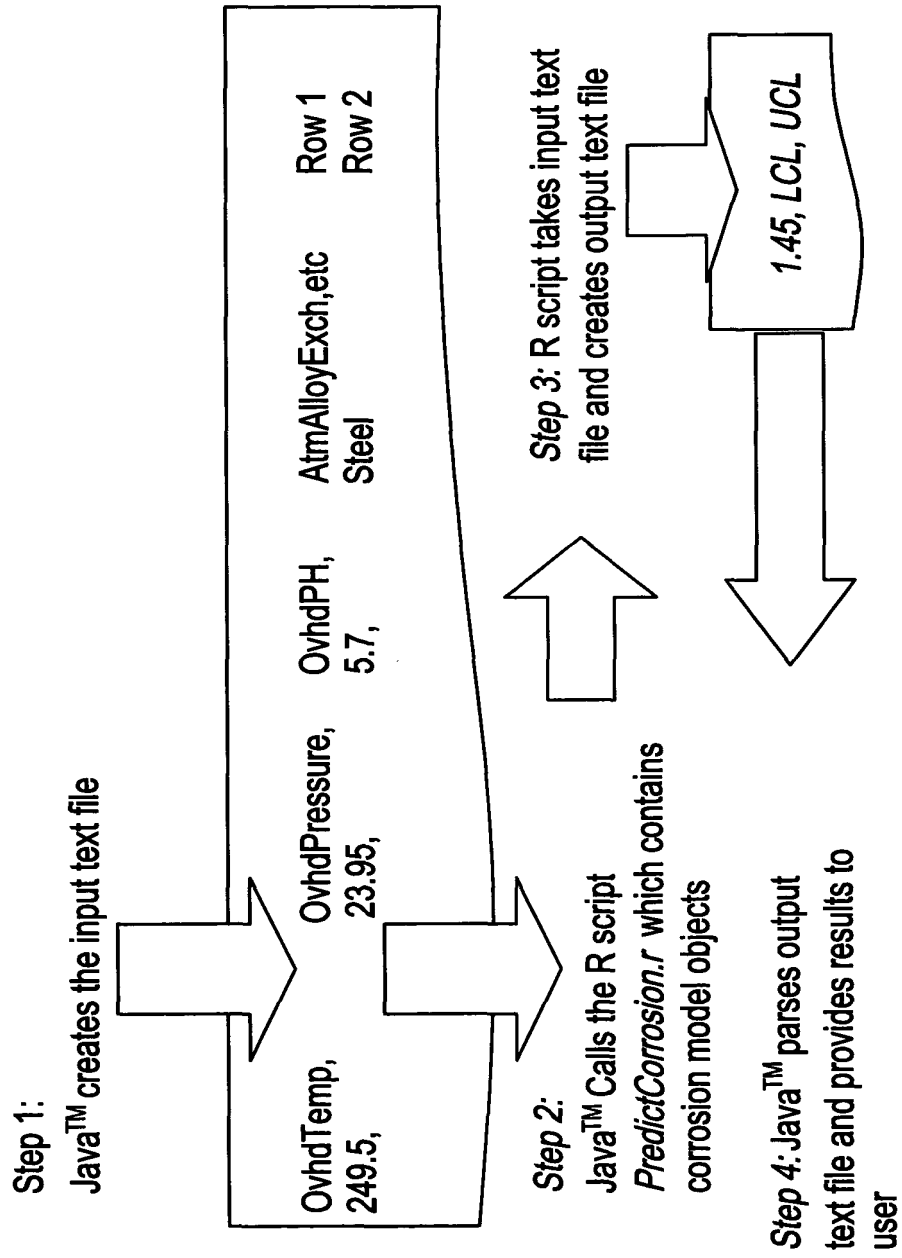


FIG. 11

Prediction Record	Slate Score	Treat Score	Operating Condition Score	Response - Corrosion	Response - SRE	Composite Score
1	.99	1	1.00	1.45		.99
<i>* Prediction 1 is calculated using model. Predictions 2 through 10 are simulated for demo purposes, but will be calculated in future.</i>						
2	.99	1	1.00	.46		.99
3	.99	1	1.00	.28		.99
4	.99	1	1.00	.66		.99
5	.99	1	1.00	.84		.99
6	.99	1	1.00	.77		.99
7	.99	1	1.00	.58		.99
8	.99	1	1.00	.86		.99
9	.99	1	1.00	.90		.99
10	.99	1	1.00	.85		.99

Back to Model Input